

On the achievements, opportunities and development strategies of Singapore's higher education opening to the outside world

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Abstract: The internationalization of higher education is the inevitable outcome of the process of economic globalization and an irreversible development trend. With the development of economic globalization and integration in the 21st century, the competition among countries is reflected in the competition at the strategic level. In line with the national internationalization development strategy in the 21st century, Singapore has defined the internationalization strategy of higher education, requiring efforts to improve the quality of higher education, make full use of international resources and talents, and strengthen international academic exchanges and cooperation, so as to develop Singapore into an international academic and cultural center. With special reference to the growth and development of transnational education in Singapore in recent years, this paper reviews the achievements, opportunities and development strategies of Singapore's higher education opening to the outside world.

1. Introduction

All countries in the world are actively strengthening the exchange and cooperation of international higher education, striving to realize the sharing of educational and academic resources, and paying attention to meeting the needs of international communication and development in educational content and methods, so as to cultivate talents with international awareness, international communication ability and international competition ability [1]. Opening to the outside world is the strategic layout of Singapore's higher education globalization, and it is also an important part of Community of Shared Future for Mankind's construction.

Thanks to the continuous development and innovation of Singapore's higher education, the continuous learning and reference from world-class universities, the provision of adequate education and training opportunities, and the strategy of "ruling the country by elites and building the country by talents", Singapore has successfully completed several economic transformations, thus achieving the goal of economic take-off [2]. In order to further meet the needs of Singapore citizens for university education and Singapore's economic development, the government has put forward a new plan for the development strategy of higher education after 2015.

2. Achievements of Singapore's higher education opening to the outside world

In September, 1998, the Singapore government announced that it would introduce 10 top universities in the world to set up branch schools or run schools in Singapore in the next 10 years. This goal was completed as early as 2005 [3-4].

With the development of economic globalization and integration in the 21st century, the competition among countries is reflected in the competition at the strategic level. Since Singapore officially implemented the reform of university autonomy in 2006, not only has university funds been allocated and used reasonably, but also a healthy competitive relationship has been formed among universities. The labor resources provided by Singapore are highly praised by employers all over the world for their high level of productivity, technical ability and positive working attitude [5].

Figure 1 shows Singapore's ranking in global competitiveness, higher education and training and labor market efficiency in the Global Competitiveness Report released by the World Economic

Forum from 2006 to 2010:

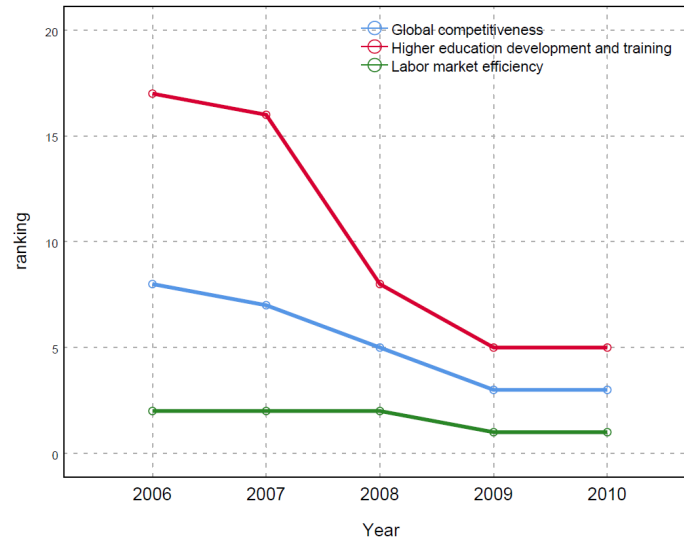


Figure 1 Several rankings in Singapore's Global Competitiveness Report

Since the university of Singapore officially implemented the autonomy reform in 2006, the development and training of higher education have been rapidly promoted in this ranking, the labor market efficiency has also jumped from the second place to the first place, and the global competitiveness ranking has steadily risen to the third place. The reform of university autonomy has also increased the autonomy of the NUS (National University of Singapore) and NTU(Nanyang Technological University) [6].

By vigorously promoting the internationalization of higher education, Singapore has deepened the mutual understanding and integration between Singapore and other countries in the world, promoted the rapid development of its own economy, strengthened its national competitive strength, and promoted the development of world education, science and technology and cultural undertakings. In 2010, NUS established Suzhou Research Institute of NUS in Suzhou Industrial Park; Set up "Master of Management Economics" and "Master of Public Administration" courses in the Graduate School of Public Administration of NTU. In 2011, more than 1,100 master graduates have been trained for governments at all levels in China; Singapore's practice and experience show that higher education, as a leading service industry, has enormous energy.

At present, the university enrollment rate in Singapore is generally higher than that in developed countries in Asia. According to official statistics, the enrollment rate of peers in public universities reached 27% in 2012, and by 2015, this ratio will reach 30%. Considering the economic development of our country and the needs of the labor market, the report suggests that the enrollment rate of peers in public universities should be increased to 40% by 2020, mainly by expanding the channels of university education [7-8].

Since the beginning of this century, Singapore has put forward the national strategy of "building a global metropolis". After two financial crises, it strengthened the strategy of developing a global city in 2001 and 2009, respectively. Since 2008, it has been led by the government. By integrating social policies such as low taxes, low rent taxes, social welfare and visas, supplemented by flexible market-oriented salary, it has attracted international talents to improve the country's competitiveness. This has made Singapore's international development of higher education leap in recent years.

3. Opportunities of Singapore's higher education opening to the outside world

3.1. Economic globalization and future knowledge economy promote internationalization of higher education

The trend of globalization requires higher education to cultivate talents with international awareness, familiarity with international economic and trade rules and management, and certain

competitiveness at home and abroad, so that people can understand and respect the cultures of different countries and strengthen international understanding [9]. In 1998, the Singapore Competitiveness Committee proposed to develop Singapore into an advanced and globally competitive knowledge economy in the next 10 years. In addition, under the condition of internationalization, education, as a service industry and trade object, has become a new field and an important part of world trade competition.

3.2. The government funds the reform of higher education

The advance of higher education and proper strategic policy make Singapore government claim to have a world-class education system. At present, Singapore's overall higher education system is based on the cultivation of diversified talents, which is a relatively independent teacher education system. Four types of teacher colleges and three language teaching and research centers are set up to train and train teachers, and professional development plans are set up to strengthen the assistance to teachers, so as to improve their quality.

Since the mid-1980s, the number of students and funds in universities and polytechnics have been steadily increasing. Among them, the number of students in polytechnics increases by about 10% every year on average, while government funding increases by 21% every year (see Figure 2).

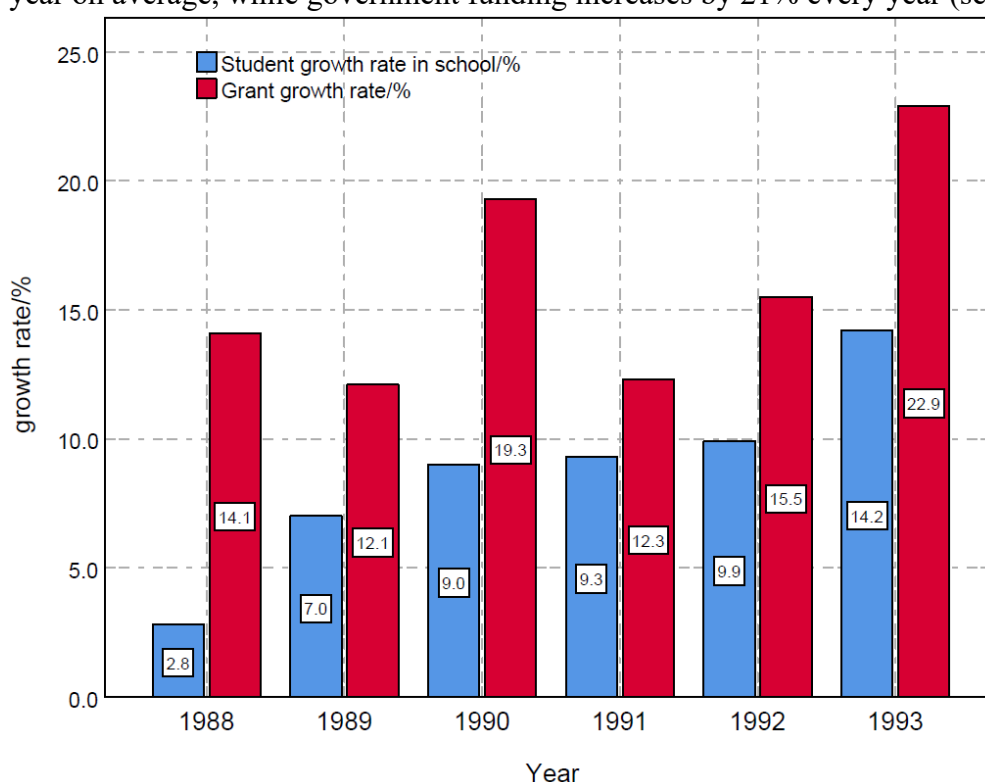


Figure 2 Changes in the number of students and government funding

According to the data provided by the Department of Higher Education of the Ministry of Education of Singapore, Singapore's education budget for fiscal year 2018 reached 12.84 billion, accounting for 3% of GDP and 17% of the total annual government expenditure budget. Institutions of higher learning enjoy government funding and subsidies. In addition, there are several foreign university branches in Singapore [10].

3.3. The reform of autonomy provides the foundation for the internationalization of higher education in Singapore

The popularization of higher education will inevitably lead to diversification. To achieve high-quality development, diversified higher education must improve the self-management ability of colleges and universities. Singapore's autonomy reform makes universities enterprise-oriented, which increases the university's sense of responsibility for the use of educational funds, and at the

same time allows it to share part of the responsibility for raising educational funds. If the national economy can still support it, reforming the universities in advance and cultivating their self-reliance ability can take precautions and meet the challenges.

Universities will adopt different charging standards for different courses [11]. Courses that can enhance students' learning experience or courses with higher costs will cost more. Although the cost of higher education is increasing, the government will continue to ensure that Singapore citizens and permanent residents can afford education expenses [12]. Therefore, the annual tuition increase of NTU and National University should not exceed 10%. The university will set up a student financial aid office to assess students' financial needs, and provide students with appropriate financial aid schemes through portfolio loans, grants, scholarships or work-study programs. The proportion of students' loans can be increased to 90% of tuition fees, which can minimize the financial troubles caused by the increase of tuition fees.

4. Development strategy of Singapore's higher education opening to the outside world

4.1. Construction of international talent team

Singapore's government follows the trend of globalization, seizes the opportunity of globalization, fully recognizes the importance of education as a strong country, and takes internationalization as its national development goal. In order to improve the international competitiveness of universities, it is an important part of Singapore's immigration policy. The government has set up overseas high-end talent headhunting companies and overseas talent pools to attract talents from all over the world. International students' sources and learning contents are also the basis of international talent training. By learning knowledge from other students, students can benefit from diverse cultural and social environments. They learn how to look at problems from different angles, so as to gain more international views.

Globalization intensifies the competition for talents among different countries. For Singapore, which has limited human resources, the challenge it has to face is even more severe. In view of this, in recent years, the Singapore government has decided to develop the local area into a regional hub, and has implemented a number of policies conducive to internationalization. Emphasis is placed on the differences between teachers' salaries, and flexible contracts are adopted to hire key scholars. At the same time, a large number of academic research resources are provided to introduce and receive senior scholars from Europe and America, which are rich in human resources. It is professors and scholars from all over the world who continuously flow into NUS through the flow of talents, which has brought NUS diversified perspectives, forward-looking thinking, fruitful research results and open international governance experience, which has made NUS a top university in the world and regarded as a successful example of Asia in the global education market.

4.2. Cooperation and sustainability

Before the realization of the ideal, the standard interests between universities will inevitably appear from time to time, and the coexistence of competition and cooperation will be a long-term phenomenon. In terms of discipline layout, we should focus on encouraging international cooperation among cutting-edge disciplines, emerging disciplines and interdisciplinary disciplines; In the professional layout, keep up with the development trend of science and technology, closely meet the needs of economic and social development, and cultivate high-level international talents who can adapt to the future development. How to pursue higher education justice and establish a governance system that adapts to the globalization of higher education will also become a common proposition for the future development of higher education in the world.

4.3. Carry out all-round international exchanges and cooperation

Universities should get more financial support, but the government still needs to invest in many other fields, so we need to solve the problem of how much education expenses students themselves should bear. The main reason why the whole national education system is very important is that

education can enable students to look at problems from a new and more mature perspective, and promote their communication with people from different cultural backgrounds, so as to promote exchanges between countries and reduce international disputes. Not only individuals, but also countries will benefit from international education. Examine and evaluate Singapore's higher education from an international perspective, constantly learn and absorb the outstanding achievements of higher education from all over the world, and strive to promote the internationalization of Singapore's higher education.

4.4. Establish a comprehensive safeguard mechanism

Whether the higher education reform can be successfully implemented or not, economic security is the key factor. The government should strike a balance between the economic affordability of individuals and the financial pressure of the government, but this does not mean that all funds are borne by the government. The government will give different degrees of financial assistance according to the poverty level of different students. These scholarships fundamentally reduce the number of loans for students and reduce the burden of students after graduation.

In the future, Singapore's higher education will meet the needs of different groups of people, especially the on-the-job staff, through various forms. Therefore, it is necessary to improve the current level of providing information to teachers and students and those on-the-job staff who want to upgrade their academic qualifications, and help them to obtain more comprehensive information about the ways of higher education. Companies and enterprises have the responsibility to evaluate the overall quality, ability and performance of candidates, and can't just rely on the degree-granting institutions to decide whether candidates will stay or not.

5. Conclusions

By vigorously promoting the internationalization of higher education, Singapore has deepened the mutual understanding and integration between Singapore and other countries in the world, promoted the rapid development of its own economy, strengthened its national competitive strength, and promoted the development of world education, science and technology and cultural undertakings. With the development of economy putting forward higher requirements for talent training, more and more Singaporean citizens want to improve their abilities through higher education, so Singapore's higher education has launched a scale expansion reform. With special reference to the growth and development of transnational education in Singapore in recent years, this paper reviews the achievements, opportunities and development strategies of Singapore's higher education opening to the outside world. The case study of Singapore shows that the role of the government in Asia is still very important, especially when it is necessary for the government to establish appropriate laws, regulations, social security and welfare systems. Therefore, East Asian governments are an effective complement to the market.

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